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Abstract

Given the increased competitive pressures to invest in integrated systems for accounting and financial management, the ability to successfully implement these types of systems is probably of greater importance today than at any other time. However, as these systems have evolved as an institutional core within organisations, a recurring and often corresponding problem is failed implementation associated with poor management of the change process. Much of the existing academic literature focuses in detail upon technical aspects, with relatively little work examining social aspects. The work presented in this paper differs in that the focus is upon the behavioral aspects of the implementation process, specifically upon the perceptions of the system users and the managers of the implementation process. The paper presents the latest results from a study employing the case study approach in investigating an implementation of an Enterprise System that integrates the accounting and finance functions within the education sector in the UK. The results highlight six main areas that appear to cause particular concern; training, user management, communication, project championing, planning, and system administration.

Keywords

Enterprise system, financial management and accounting, implementation, change management

Introduction

With the growth of the Internet, organisations have been faced with increased competitive pressures to invest in Enterprise Systems that provide an integrated solution for financial management and accounting (Spathis, 2006). However, as technology becomes increasingly integrated within organisations, a recurring problem associated with failed IT-based investment is poor change management, and the apparent failure to perceive the IT project as a broader IT enabled change programme (Willcocks & Griffiths, 1997; Sherer et al. 2003; Irvine, 2006). Understanding the corresponding changes required within an organisation is fundamental to the understanding of the role of IT in adding value to organisational initiatives (Powell & DentMicallef, 1997).

Whilst management literature is replete with discussions on individual, organizational and societal transformation (Neal et al. 1999), there is no single, generally accepted theory to explain the change process, nor any well-validated prescription for bringing change about. Indeed, according to Argyris (1998), no given approach even appears to be noticeably more successful than the others. There remains therefore much scope for the study of change associated with the use of IT within organizations, and the processes used to effect it.

Much of the existing academic literature on managing IT projects is systems-specific, focusing in detail upon technical aspects, with relatively little work examining behavioral aspects, such as training requirements and purchaser expectations during the implementation process. The work presented in this paper differs in that the focus is upon the behavioral aspects of the implementation process, specifically upon the perceptions of the system users and the managers of the implementation process. The paper presents the latest results from a study employing the case study approach in investigating an implementation of an Enterprise System that integrates the accounting and finance functions within the education sector in the UK.

The Integrated Solution

The software being implemented is called an Enterprise, or otherwise referred to as an Enterprise Resource Planning (ERP), system that facilitates a central finance system that integrates the data management (Finance Data Warehouse), process modeling (Business Processes), and information delivery (Analytics/Financial Reporting). The system is used at all levels of the organization and supports the following functions:

- Financial Management
- Human Resources and Payroll
- Procurement Management
- Project Costing and Billing
- Financial Reporting and Analytics
- Business Process Automation

One of the main advantages of using the system is to achieve a single corporate information system on a single platform. The system allows local processing and enquiries which provides greater control for departments and removes the requirement for maintaining separate financial records, checking and reconciliation to the central system from local records, and the time delay in processing of transactions. Booth et al. (2000) also suggest that the Enterprise System allows practitioners to perform more up-to-date accounting practices, such as product lifecycle costing (PLC), balanced scorecards and activity-based budgeting (ABB).

The system can therefore work for the benefit of practitioners and provides a robust, secure and flexible system that allows them to respond almost immediately to business operations as it facilitates a more uniform approach to its finance across various offices (Kahan, 2006). Furthermore, this integrated solution and therefore real time access to data across departments can also help the practitioner satisfy the increasing Government regulations and audit trails with greater ease.

However, despite these benefits, high failure rates of ERP implementations have been documented due to the fundamental changes required in the way the organization operates (Nah et al. 2003; Yusuf et al. 2004). These types of systems often involve a major redesign of business processes and therefore a change in job functions and responsibilities, all of which require significant organizational learning and change (Robey et al. 2002; Lang et al. 2001).

The Study

The situation is interesting in that the implementation took place at the same time as the institution embarked upon a major restructuring project, yet these two major projects appeared to be conducted in complete isolation from one other.

In order to disguise the research site and therefore protect the positions of those studied, pseudonyms - which are an established approach to disguising participants and locations in research projects (Barnes, 1979) - have been used throughout this work. The institution investigated is therefore referred to from this point on as *West County College* (WCC). The old and new systems have also been disguised by pseudonyms, being referred to hereafter as the *Minnow* (the old) and the *Asserto* (the new) system. This action is intended to allow the reader to concentrate on the results of the investigation at a level of abstraction above that which would inevitably be the case if the systems and vendors were to be named.

With approximately 7,500 full and part-time students, WCC in its current form has been awarding degrees, sub-degree qualifications (for instance Higher National Certificates) and professional qualifications in a variety of study areas since the mid 1970s. During recent years the College underwent a major organizational restructuring resulting in the dismantling and subsequent merger of numerous academic departments and administrative support units. As a direct consequence of this activity, substantial numbers of staff (academic, academic-related and administrative) were displaced and redeployed elsewhere within the organization. At the same time as this activity was taking place, the existing financial system was being supplanted in a major system implementation exercise.

Change Management and Information Systems

Most modern IT-related investments involve some form of change, regardless of whether the change is initially focused on a single individual, work group, or the entire organization (Paré and Jutras, 2004). New products are continuously being selected and installed, and are often accompanied by changes in the user base and location, and/or in the core business or information technology plan (Cullen & Pierson, 1999). Indeed, as organizations evaluate and implement changes to their information systems infrastructure, change has become an increasing part of *business as usual*. Some such changes are incremental, while others are major implementations requiring significant efforts to plan and execute. Despite this level of activity, and the fact that management literature is replete with discussions on individual, organizational and societal transformation (Neal *et al*, 1999), there is no single, generally accepted theory to explain the change process, nor any well-validated prescription for bringing change about. Indeed, according to Argyris (1998), no given approach even appears to be noticeably more successful than the others.

According to Miller (2002:359) "*only three out of four change initiatives give the return on investment that leadership forecast*" and this, he attributes to failure during execution. He argues that many organizations accurately predict the changes the organization needs to make, but often get the management of the change process wrong. Organizations can waste vast amounts of resources and time, and in extreme cases go 'bust' due to their failure in the management of the change process.

As technology has evolved as an institutional core in organizations, the need for change management has become a major requirement and the Information Systems (IS) manager can no longer simply rely upon technical skills, as was so often the case in the past. According to Markus and Benjamin (1996) IS specialists that acquire change skills and utilize them effectively can increase the chance of success more so than an IS specialist that solely relies on their technical skills. This view is supported by leading analyst, Gartner (2006) who argues that due to the rapid changes that firms are experiencing in IT, organizations must ensure that they do not have an imbalance of too many technical skills and not enough people who understand how IT interacts with business processes and organizations.

IT should therefore be no longer viewed as a technical 'service', but considered an integrated organizational process (Robson, 1997), whereby IT-related investment requires a corresponding change management approach. Indeed, Markus and Benjamin (1996) predict that change management will become the largest and most important part of intraorganisational IS work in the future. They partly attribute this to a dramatic increase in IS products being 'bought in' rather than developed in house and argue that the success of an IS investment often involves knowledge of the organisation to a level that cannot be gained by outsourcing.

Organizational Adjustment to Change

Taking into account the variable nature of change and the complexity of the phenomenon, it is scarcely surprising that change may be viewed from a number of perspectives. Here we briefly discuss change from four organizational perspectives; management and leadership behavior, culture, power and politics plus user involvement in the change process.

There are however, other viewpoints and approaches to the categorization of change, many of which overlap with those discussed here - for instance those which suggest analyzing from the perspectives of innovation per se. It is important to acknowledge that no single perspective of the change process has a monopoly of the truth, and that the use of multiple viewpoints can provide a valuable lens through which to view the change process.

Management and Leadership

The literature suggests that it cannot be overestimated how important leadership and management behavior is to the success of any change management initiative (Kotter and Schlesinger, 1979; Kanter 1995; Kotter 1996; Clarke, 1994; Kanter 1998). Kotter (1996) explains that effective leadership is important to the change process because it can define and effectively communicate how the organization will appear after the change, thereby inspiring personnel to make it happen.

The fear of change is widely accepted as a natural reaction and the change process in individuals can be likened to a series of crises or stages within a crisis. Resistance to change is very much linked to the individual's perception of what the proposed change means to them and without full commitment and foresight from leaders, implementation of change will be problematic (Hellriegel, 1992).

Miller (2002) focused on the softer qualities and actual beliefs of the change leader. He argues that the change leader needs to possess personal change adaptability qualities; the change leader should be optimistic, self-assured, innovative, collaborative, purposeful, structured, and proactive. Markus and Benjamin (1996) support the importance of the role adopted by the change agent and they also highlight the significance of the ability of the change manager to interchangeably adopt differing roles to suit the context of the change initiative.

Culture

Models of change adopting a cultural perspective are concerned with the social settings in which the innovation occurs and demonstrate commitment to the everyday reality and cultural norms that are disturbed when innovation threatens. The culture of an organization, or group, can often be one of the main inhibitors to the change process. If change is to be successful it needs to be embedded into the culture of the organization (Kotter and Schlesinger, 1979) and therefore a consideration of culture helps to identify success factors for managing change. Schein's (1992) three-fold cultural classifications discusses both the intangible and tangible elements ranging from invisible assumptions and values that tend not to be documented, to the tangible artifacts such as the policies and procedures of the organization. Whilst the artifacts of an implementation might be clear, the success of it could often be determined by the organization's assumptions and values.

Power and politics

Political perspectives assume the existence of alternative and competing rationalities (Slater, 1985), and this central position of contention suggests that in many situations, predicting reaction to change is relatively straightforward. Indeed, management may employ different approaches to gain the support of various groups and individuals - the term micropolitics is often used to describe the tactics used to seek power and influence to further interests.

Power and politics, and the power struggles produced when change is inevitable, can also often be closely linked the outcome of a change implementation (Wilson, 1992; Kanter, 1995). In order to deal with resistance, the change manager will often need to work politically to build support amongst employees at all levels; the change recipients, fellow managers, and senior executives.

User Involvement in the Change Process

Change has the potential to complicate life for people, regardless of its motivation, desirability, or method of implementation, and understanding the way in which individuals react to change can assist management in the planning and implementation of change initiatives (Hayes, 2002). The impact of change on individuals, and the meaning that individuals give to their involvement in the change process has been given much consideration in the literature (see for instance Fullan, 1991; Harris, 1989; Nanus, 1992; Upton and Brooks, 1995). Kotter and Schlesinger, (1979) propose measures to combat resistance which could be adopted in relation to certain circumstances individually but for other circumstances may need to be adopted in combination; these are participation, education and persuasion, support, rewards, manipulation, cooptation and coercion.

Research Design

The decision regarding our choice of research strategy was heavily influenced by the purpose of the investigation which was to investigate the perceptions held by various stakeholder groups of a range of aspects of the implementation process. Robson (1993) provides a useful and practical method of categorizing the investigation, which could be viewed as being primarily descriptive in nature, albeit with limited exploratory elements. Both descriptive and exploratory aspects of the study were entirely in keeping with Marshall & Rossman's (1995) views of the purposes of research, the descriptive aspects being the documentation of the implementation events and the identification of the beliefs and attitudes of the stakeholder groups, and the lesser exploratory aspects being the identification of the salient themes within context.

The research strategy that appeared best suited to the purpose of this investigation was the case study, which Marshall & Rossman (1995) suggest is suitable for both descriptive and exploratory work. The case study, according to Yin (1993), is also the method of choice when the phenomenon under investigation (in this case, the implementation process) is not readily distinguishable from its context (the everyday activities within WCC). In order to exploit multiple sources of evidence, three primary methods of data collection were employed during our investigation; observation, interviewing, and document review.

Following qualitative procedures, 33 semi-structured, in-depth interviews were conducted (in addition to informal interviews) with a range of system users across all grades. These included six departmental heads, 20 administrative staff (comprising of three senior administrative assistants, eight departmental secretaries and nine finance staff), and seven technicians. These were selected to interview as they were required to use the system on a regular basis. Questions included prompts such as "What is your view of the change from the old system to the new system?", "Were your expectations about the new system met?", "What, in your opinion, were the reasons for changing from the old to the new system?"

Access was also gained to interview four members of the management team responsible for introducing the new system to ascertain their perspectives of the initiation. Five meetings were observed, and documents analyzed ranged from minutes of meetings to individual memos and e-mails. Although observation and documents review activities provided useful information, the principal data collection method employed was interviewing. Interviews occurred approximately one year after the new system went 'live', thus allowing staff to gain a reasonable amount of experience of the implementation process and of using the new *Asserto* system.

Results and Discussion

Although our overall research strategy is that of the case study, and our investigations are therefore examining a number of aspects of the implementation process, we limit ourselves in this paper to presenting the perceptions of the process as held by the implementation project management team and the (non-academic) user population. The non-academic user population is made up primarily of departmental secretarial staff, administrative support staff, and technical support staff. Results are presented across three basic themes; a comparison of the old and new systems (including user expectations and perceptions of

the reasons for the implementation); aspects of implementation management, project planning and quality of training provided.

User Perspectives: Comparison of the Old and New Systems

Participants were asked to convey their opinions of the new *Asserto* system in comparison with the old *Minnow* facility. The majority of Departmental Secretaries expressed a preference for the old system, their expectations about the new system being largely unrealistic, claiming "*they said it would be easier, but it's not, now there is too much admin*"**.** A Senior Administrative Assistant had mixed feelings about the change from the old system to the new system. Her personal view was that the old *Minnow* system was much easier to use.

"*From a control point of view the new system is probably better in terms of security and control over purchasing - although there are still many areas that need attending. There appears to be a communication loss, a lot of time is spent on problems, discrepancies in orders, invoices not paid and hence more administrative work*".

A Senior Science Technician (whose duties included using the system to place orders and monitor expenditure) also had mixed feelings about the change. In some ways she considered it better as there was improved financial control but she had largely unrealistic expectations about the new system, stating that "*Finance had promised quicker deliveries but the system was quite laborious and time consuming*". When questioned on their opinion on the reasons for migrating to the *Asserto* system, there were a range of responses including; "d*on't know*", "*they don't tell us anything*", "*to cut down on the amount of paper work*" and "*greater control*".

One Senior Finance Officer was very much in favor of the change as he considered it far more efficient as orders could now be processed more quickly. He felt the old *Minnow* system was "*letting us down*" as it was only producing monthly reports that made accurate budgetary monitoring and control difficult. The Finance Officer's expectations regarding the implementation process from the old *Minnow* system to *Asserto* were largely unrealistic, expressing the view that "*there were a lot of problems*" and "*Finance* [Department] *were shocked*" by the problems occurring. These "*shocking*" events included a period when the system did not properly differentiate between departmental codes, resulting in orders placed by one department being accounted for against another department's budget. All participants commenting on the implementation process described their expectations as being largely unrealistic.

User Perspectives: Aspects of Implementation Management

Four aspects of implementation management were identified as being most relevant (and most widely applicable in terms of those participating) to the study. It was recognized that training was easily identifiable, whereas the other areas selected – documentation, communication, and user management - may not be as easy for participants to identify. Therefore the subject of training was discussed separately; whilst participants were invited to comment on the other three aspects only if they wished. This in itself provided some indication of how important staff felt these issues to be. Of those commenting on communication issues, responses were evenly split between positive and negative viewpoints. With regard to the user management issues, all of those commenting were of the opinion that the users had suffered unnecessary disruption during the implementation process that could have been avoided with better planning.

Documentation

Those commenting on documentation proffered mixed opinions. Users of *Asserto* were provided with documentation that had been produced in-house. However, the majority of participants felt that the information received was not very helpful as they found ""*a problem relating it*". When asked if the information was comprehensive and helpful in using the new system, one Chief Technician commented that he would "*call it confusing not comprehensive*" and therefore did not find it useful. Others, however said they often referred to it when the need arose.

Communication

All participants said they were not informed of the reasons for migrating to the *Asserto* system, neither were they asked to attend any meetings or be involved or consulted regarding their opinions on the acquisition of a new system. Although users were provided with bulletins and memoranda detailing issues relating to the new system on an on-going basis, the majority of participants still argued that they were not kept up-to date with changes and foreseen problems in time to avoid disruption. Numerous participants claimed that they were not informed in advance when the system would be unavailable and that such occasions occurred fairly regularly in the first year due to system upgrades required to rectify software faults. Other users did accept that that they were occasionally informed by e-mail when the system would be unavailable, but as these messages

generally arrived on the day in question, they were of little use in allowing time to organize the rescheduling of work. Only two secretaries said that they were generally kept well informed of the likelihood of system non-availability, but even they wondered why they couldn't gain access at other times. They assumed they were unable to gain access due to system overload - when "*there are too many people trying to log on at one time which overloads the system*".

One Senior Technician found the lack of communication particularly disconcerting and frustrating when initially attempting to become familiar with the new system as she wasn't sure whether it was her fault that she was unable to gain access to the system, or if the system was down. Reactions relating to communication issues therefore ranged from resigned acceptance, to finding the situation "*highly annoying*". One Chief Technician gave the example of the system constantly producing an error message when he attempted to access an old order. He assumed that this was due to some fault of his own, but eventually discovered (as a result of contacting the Finance Division) that much to his frustration, this was in fact a fundamental system fault.

User Management & Planning

Participants who argued that an inappropriate time in the year was chosen for installing the new *Asserto* system all gave the same reason - that they were undergoing major restructuring at the same time. One participant who as a result of the restructuring had moved from an administrative to a secretarial post, felt that staff were not given enough time for familiarization before the system went live, stating that "*in the restructuring process we were moving offices, finishing off previous duties, having to get used to new secretarial duties as well as having to familiarize ourselves with a complex finance system*".

One departmental secretary retained her position during the restructuring, but found that the department in which she worked had substantially altered in structure, staff composition, and leadership (involving a new Head of Department). She strongly felt she was not given enough time to come to terms with the departmental changes and familiarize herself with the new *Asserto* system before it went live. She found the implementation process particularly challenging as she found herself in a similar situation to the Senior Science Technician previously discussed in not having a computer compatible with the *Asserto* system in the first two months of the system going live. She found this position particularly frustrating, maintaining that "*no-one checked that we had the right equipment*".

User Perspectives: Training

Training is generally seen as a key element in the success of any implementation process, and this view of the key position of training was shared by those managing the project. Training in use of the *Asserto* system was conducted in-house by a team of three WCC staff (there being no system-vendor input to these activities); two trainers were from the Purchasing Section and one from the Finance Division.

The majority of secretaries were reluctant to criticize the training as they felt that the trainers "*did a good job*" given the limited time allocated. However, all the staff interviewed said they were disappointed with the amount of time allowed to train and adapt to the new system – "*we started our new jobs in August* [as a result of the restructuring activities]*, the system was installed in August and we were trained in August*". This timing of events resulting in some staff taking up new posts with a new system (which they were required to use in order to perform their duties) at the beginning of August, waiting for training to be provided from mid August onward.

Staff were eventually provided with one practical-based training session of approximately two hours duration in a groups of around 12-15 people. It was generally felt that this was not enough time especially in what was perceived to be a large group. Many staff (all secretaries) felt the need for more time to train, and to be given more than one session and/or one-to-one sessions – "*we were given a quick run through in a morning or afternoon and then left to get on with it*". Some participants described the training session to be a bit "*vague*" and "*rushed*".

Whilst the Technicians had adapted quite well to the new system in comparison to others who they felt to be "*still struggling*" they were still unsatisfied with the training received and with the time allowed -"*there was just one practical based exercise in the training session where trainees had to place an order. However, this was inadequate as there are many other functions of the system we have to use other than just placing an order*".

Management Perspectives: Selecting the Vendor and the System

The management team appeared to be particularly meticulous and impartial in choosing the new system and vendor. An invitation to tender was produced, detailing all the functionality required of the new system. After short-listing four vendors,

each gave a presentation and a demonstration of their system in a live operational environment. During the process of selecting the new system, all the specified required functionality was checked against the new system, with the successful vendor including system specifications and limited performance guarantees in the contractual agreements. The successful vendor (developers of the *Asserto* system) also offered three different levels of system support; Gold, Silver and Bronze. WCC selected the Silver option, entitling them to unlimited on-line (telephone) help, but not to any on-site assistance.

Management Perspectives: Planning

There was extensive debate within the management team over whether the time to go live was the most appropriate as the date coincided exactly with the implementation of the new organizational structures (academic, managerial and administrative) arising from the restructuring activities. A proportion of the project management team expressed concern that this (College restructuring) was such a major event that (partly due to the sheer volume of users affected by restructuring), it could undermine the success of the implementation project and adversely impact upon the ability to provide continuity of service. The project manager however disagreed and "*wondered what all the fuss was about*". He argued that "*it* [the implementation] *was a fait accompli* and thought there to be "*no ideal time*", arguing that "*my preference was to go for it with a big bang*". It was however conceded that there was not enough time before going live for familiarization with system.

Management Perspectives: Documentation, Communication, User Management

The management team attempted to communicate information regarding the implementation project to staff by setting up a user group comprising a random sample of individuals selected from the user population. It was felt by management that "*no-one was interested and it fell into a heap*". Users had been asked what they required in terms of a new system but it was thought that they had experienced problems in identifying their particular requirements and matching them with the potential capabilities of new systems. When the system was up and running the management team attempted to indicate any foreseen problems by using formal methods such as memoranda to keep staff informed. However, they conceded that over the past three months this had become increasingly difficult as there had been so many operational problems. A decision was taken to provide users with documentation that had been developed in-house rather than by the vendor in order to avoid the use of system jargon and providing too much detail.

Management Perspectives: Training

Management were questioned on the quality of the training they provided. Initially, the vendor provided 23 days of training to the project team, but the organization felt that it was too expensive to appoint the vendor to train the entire user population. User training was therefore performed in-house, conducted by WCC staff. A total of 270 users were trained in groups of 16, with each group attending one three-hour session and there being no opportunity for follow-up sessions - significantly less time than the management team had received from the vendor. The management team felt that they did allow enough time for training although they expressed difficulties in training the "*enormous number of users*". Management were aware that there was a need to increase the training provided but it was considered that the operational problems encountered had removed the possibility of this, stating that they planned to eventually offer "*knowledge extension sessions*" when operational problems were minimized. They also added that apart from providing trainees with a Help Desk number, all staff had access to the in-built "help" function of the new system.

Conclusions

It appears that much effort was expended in planning the selection and purchase of the new system, but significantly less effort in orchestrating a smooth introduction. Indeed, six main areas appear to have caused significant discomfort for the user population; training, communication, user management, project championing, planning, and system administration (see Table 1 overleaf for a summary of these findings).

Training was criticized by the users in terms of the limited amount available. Although training did take the form of practical-based sessions, they were limited in scope and no revision sessions were provided. The groups were relatively large, and the timing of sessions appears unfortunate in taking place some weeks after the system went live.

Users criticized communication in terms of both timeliness and use. Although management attempted to employ formal methods such as meetings and memoranda to keep staff informed, these efforts did not appear successful for one reason or another. The user group appeared (according to the management team) to fail due to user apathy, although management admitted that they were overwhelmed at times by the effort required in keeping all users informed of all that was going on. These criticisms of communication activities also apply to a certain extent to the issues of user management and system

administration, whereby providing comprehensive information for users and making staff feel valued by involving and consulting them as much as possible, were clearly not achieved. Management were viewed as either not being fully in control, or working to a hidden agenda. Visible championing and more effective change agentry (via better communication) would again result in greater levels of user acceptance due to greater understanding of the need for change.

Finally, we consider the issue of planning. Many of the problems encountered during this project can be attributed in one way or another to the planning process, and the perceived pressure to implement the new system on the 1st August. Clearly in this case there was not enough time allowed for users to become familiar with the system prior to it going live. Although there was evidence that there was an awareness of other projects taking place at the same time (specifically the restructuring project), there was no evidence that this had any impact on the timing of the implementation project. Indeed, the attitude of the project manager in refusing to consider an alternative implementation date thereby avoiding a direct clash with the implementation of the restructuring procedures is highly questionable, as is a preference for a "*big bang*" approach given the importance of the system to the operational activities of the College.

It is recognized that results of this study are conclusive only in the immediate context of the implementation process examined, however, they can be used to alert future managers and practitioners of areas likely to be problematic, and to recommend certain aspects and procedures that were seen to work well. Future research may extend to a more detailed examination of the actual accounting and finance benefits and disbenefits experienced by practitioners as a result of adopting the system. Furthermore, as these systems often involve a major redesign of business processes, other areas of future activity could involve how this has affected the role of accounting and finance practices and the quality of information.

Table 1: Summary of Findings

Aspect	**Summary of Findings**
Project Championing	Provide visible championing and more effective change agentry (via better communication). Management provide full commitment, foresight and support for the implementation process. Appoint a change leader with previous experience of IT enabled change programmes.
User Management	Make staff feel valued by involving and consulting them as much as possible. Provide comprehensive information for users. Ensure staff who have contact with user population are given guidelines on how to deal with complaints.
Communication	Communicate reasons for change and try to indicate any foreseen problems. Use formal methods such as meetings and memoranda to keep staff informed. Ensure that part-time staff kept informed of changes. Look carefully at policy of communication towards users (may involve briefing staff on what can be said to users if problems occur).
Planning	Ensure enough time before going live for familiarization with system. Consider what other projects are underway during the implementation process . Select most appropriate time to implement the system in terms of user numbers and continuity of service provision.
Training	Allow enough time for training. Investigate amount of vendor input. Use practical-based sessions with regular revision sessions. Consider how best to organize training sessions – small groups using key trainers worked well in this instance. Provide enough time for training sessions to be prepared. Schedule training sessions to maximize continuity and effectiveness.
System Administrators	Use documented cases and existing knowledge when preparing for implementation. Involve those who have had experience of the planning and execution of projects. Give a positive impression throughout the project.

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